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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,172	02/25/2005	Klaus Biester	1600-11700	8330
45933	7590	11/09/2006	EXAMINER	
CONLEY ROSE, P.C.			HO, HA DINH	
PO BOX 3267			ART UNIT	
HOUSTON, TX 77253-3267			PAPER NUMBER	

3681

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/526,172	BIESTER, KLAUS	
	Examiner	Art Unit	
	Ha D. Ho	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/27/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. This is the first Office Action on the merits of Application No. 10/526,172 filed on 02/25/05. Claims 1-32 are currently pending.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because of exceeding 150 words in length.

Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of improperly making reference to the claim (see paragraph 0008).

Appropriate correction is required.

### *Claim Objections*

5. Claims 1 and 11 are objected to because of the following informalities:

- Claim 1, line 3, the word "the" before "said" should be deleted.
- Claim 11, line 2, the word "the" before "said" should be deleted.

- Claim 20, line 2, "chive" should be deleted.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Regarding claims 1 and 27, the phrase "or similar" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or similar"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).
- Regarding claims 1, 6, 7, 12, 15, 16, 24 and 31, the term "in particular" renders the claim indefinite since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. One could not tell from such a claim if the narrower range or limitation is a restriction or limitation on the broader range or limitation.
- The following claims have limitations that lack antecedent basis:
  - in claim 1, "the rotating spindle" and "the movable guide slot."
  - in claim 3, "the rotating spindle."
  - in claim 4, "the rotating spindle."
  - in claim 5, "the rotating spindle."

Art Unit: 3681

- in claim 7, “the engaging elements.”
- in claim 8, “the fixed collar.”
- in claim 9, “the fixed collar.”
- in claim 10, “the rotating collar.”
- in claim 11, “the rotating collar.”
- in claim 12, “the rotating collar.”
- in claim 13, “the rotating collar.”
- in claim 15, “the flexible, cup-shaped sleeve,” “the harmonic drive,” “the second end,” and “the rotating collar.”
- in claim 16, “the wave generator” and “the harmonic drive.”
- in claim 17, “the driven shaft.”
- in claim 19, “the spurwheel” and “the outer tooth arrangement.”
- in claim 20, “the spurwheel” and “the outer tooth arrangement.”
- in claim 21, “the shaft segment” and “the spurwheel.”
- in claim 22, “the shaft segment” and “the driven shaft.”
- in claim 23, “the worm” and “the driven shaft.”
- in claim 24, “the driven shaft.”
- in claim 25, “the drive shafts” and “the driven shaft.”
- in claim 26, “the drive shaft.”
- in claim 27, “the drive shafts.”
- in claim 28, “the drive shaft” and “the motors.”
- in claim 29, “the drive shafts” and “the driven shaft.”
- in claim 30, “the drive shaft.”

- in claim 31, "the motor."
- in claim 32, "the drive shaft," "the flexible, cup-shaped sleeve," "the harmonic drive," "the helically toothed drive wheel" and "the wave generator."

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 5-13, 17 and 25-30, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Biester et al (WO 02/37008).

Biester et al show a rotating regulating device for the rotation and/or linear displacement of an actuating element 3 of a valve with a spindle drive 45 and a drive train 46 rotationally driving the spindle drive, said drive train exhibiting at least one reduction gear unit 44 and a drive device 43 connected to it for movement, characterized in that the spindle drive 45 exhibits at least one engaging element 17, essentially protruding radially outwards, which engages guide slots (11-14), whereby a first guide slot 14 is fixed relative to a device housing 34 and a second guide slot 12 can be rotated relative to the device housing and/or is supported for displacement in the longitudinal direction of the spindle drive, whereby the guide slots exhibit at least different slopes in the longitudinal direction (page 9, lines 9-11) of the rotating spindle and the movable guide slot is connected for movement to the actuating element.

***Claim Rejections - 35 USC § 103***

Art Unit: 3681

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Biester et al (WO 02/37008).

Biester et al show the nut 46, not the spindle, being supported so that it can be rotated, but is axially immovable, and the spindle 45, not the nut, can be displaced along the nut and can be rotated relative to it. The actuator having a spindle being supported so that it can be rotated, but is axially immovable, and a nut being displaced along the spindle and being rotated relative to spindle is old and well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the actuator of Biester et al such that the spindle can be rotated, but is axially immovable, and the nut can be displaced along and rotated relative to spindle since this is old and well known in the art.

12. Claims 14-16, 22, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biester et al (WO 02/37008) in view of Gilges et al (US 5,370,011).

Biester et al do not show a harmonic drive and a position sensor.

Gilges et al show an actuator having a harmonic drive disposed between a motor 1 and a ballscrew/nut assembly 12 and a position sensor 17.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the actuator of Biester et al a harmonic drive and a position sensor as taught by Gilges et al in order to improve the movement characteristics of the actuator (col. 2, lines 32-33).

13. Claims 18-21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biester et al (WO 02/37008) in view of Appleford et al (US 5,497,672).

Biester et al do not show features recited in claims 18-21, 23 and 24.

Appleford et al show an actuator having a motor 8 and a worm and wheel mechanism (9; 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the actuator of Biester et al a motor and a worm and wheel mechanism as taught by Appleford et al in order to provide a simple and cost-effective construction (col. 1, line 44-46).

#### ***Cited Prior Art***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Henschke'826, Schreier'513, and Gilges et al'097 which each shows an actuator having a ballscrew/nut mechanism. Kiyosawa et al'677 shows a harmonic drive.

#### ***Communication***

15. Submission of your response by facsimile transmission is encouraged. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see M.P.E.P. 502.01. In general, most responses and/or



Art Unit: 3681

amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check. Responses submitted by facsimile transmission should include a Certificate of Transmission (M.P.E.P.. 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to  
the Patent and Trademark Office on \_\_\_\_\_

(Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_  
\_\_\_\_\_  
(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.P.E.P.. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha D. Ho whose telephone number is **571-272-7091**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on **571-272-7095**.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HDH  
(571) 272-7091  
November 6, 2006

  
**HA HO**  
**PRIMARY EXAMINER**

Art Unit 3681

11/06/06